CLAIMS

1. A system for control of oil pressure in engines having cylinder deactivation hydraulic lifters, the system comprising:

an oil pump driven by the engine and supplying pressurized oil to an oil gallery for lubricating selected engine components and controlling actuation of cylinder deactivation valve lifters;

an oil pressure control associated with the oil pump and operative to control oil pressure supplied to the oil gallery under normal operating temperatures; and

an auxiliary pressure relief valve in the system and operative to maintain oil pressures at high engine speeds and low oil temperatures below a maximum allowable pressure, thereby permitting actuation of the deactivation lifters.

2. A system as in claim 1 wherein the auxiliary pressure relief valve is connected with a main oil gallery.

3. A system as in claim 1 wherein the auxiliary pressure relief valve is connected with a valve lifter gallery.

4. A system as in claim 1 wherein engine includes a cylinder block and the auxiliary pressure relief valve is mounted in and connected to a gallery in the cylinder block

5. A system as in claim 4 wherein the auxiliary pressure relief valve is mounted in a crankcase portion of the cylinder block.

6. A method of extending the operating range of cylinder deactivation valve lifters in an engine oil system during operation of the engine at low oil temperatures and high speeds, the method comprising:

supplying pressurized oil to an oil gallery from an engine driven positive displacement oil pump for lubricating selected engine components and controlling actuation of the cylinder deactivation valve lifters;

limiting output of the pump by bypassing excess oil to control oil pressure supplied to the oil gallery under normal operating oil temperatures; and

limiting pressure in the system at high engine speeds and low oil temperatures by opening an auxiliary pressure relief valve in the system operative at reduced operating oil temperatures to maintain oil pressures below a maximum allowable pressure, thereby permitting actuation of the deactivation valve lifters.

7. A method as in claim 6 including mounting the auxiliary pressure relief valve in a portion of the engine containing a main gallery.

8. A method as in claim 7 wherein the auxiliary relief valve is located in the engine crankcase.

9. A method as in claim 8 wherein the auxiliary relief valve is mounted in bore of a crankcase connected with the main gallery.